



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,864	09/30/2003	Rahul Gupta	5367-230	6285
7590 01/18/2008				
Thomas Langer, Esq. Cohen, Pontani, Lieberman & Pavane Suite 551 Fifth Avenue New York, NY 10176				
			EXAMINER	
			LIN, JAMES	
			ART UNIT	PAPER NUMBER
			1792	
			MAIL DATE	DELIVERY MODE
			01/18/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/674,864	Applicant(s) GUPTA ET AL.	
	Examiner Jimmy Lin	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5, 7-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) 3, 5, 7, 11, 13, 14, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8-10, 12 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/10/2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-2, 8-10, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of "a different solution containing a different material" (claim 1) is indefinite because there is no basis of comparison of the solution and material. Thus, it is unclear as to what the solution and material is different from. For the purpose of this examination, the "different solution" and the "different material" will be interpreted to be different from the earlier claimed solution and material.

The recitation of "said cover layer" (claim 8; step (c) and last paragraph on pg. 4). The claim requires a first and second cover layer. It is unclear if the recitation refers to the first or second cover layer. For the purpose of this examination, it will be interpreted to be at least inclusive of both.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 8, 10, 12, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 03/022010 (references made are to the English equivalent U.S. Publication No. 2004/0169462, hereinafter "Sasaki") in view of Ozin et al. (U.S. Publication No. 2002/0045030).

Sasaki teaches a method of making an organic electroluminescent (EL) device. Grooves 3R, 3G, and 3B are formed on a substrate surface. Stoppers 5a and 5b are put into grooves 3R and 3G, respectively. The substrate is dipped into a blue EL solution 8B to fill groove 3B by capillary action. Stoppers 5a and 5b prevent the blue EL solution 8B from filling the respective grooves. The substrate is then dipped into a stripper solution until the stopper 5b is dissolved. The process is repeated to fill in grooves 3G and 3R ([0080]-[0107]; Figs. 4-17).

Sasaki teaches that a spacer layer 60 can be formed on the substrate (Fig. 2; [0083]), but does not explicitly teach pressing a cover layer against the spacer layer. However, Ozin teaches that it was well known to press a cover layer against the substrate in the process of dipping a substrate in a solution and coating grooves by capillary action [0125]-[0126]. The cover layer is then removed after deposition. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have pressed a cover layer against the spacer layer 60 of Sasaki and to have removed the cover layer after filling in the grooves of Sasaki with a reasonable expectation of success because Ozin teaches that such a process was operable in the art. The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

Sasaki and Ozin do not explicitly teach that a stacked layer is formed by repeating step (b) with a different solution before removal of the cover layer or by repeating steps (a)(ii), (b), and (c) with a different solution after step (c). However, Sasaki teaches that the anode 58 can be formed using the capillary coating method [0106]. The anode will be coated prior to the coating of the EL material. Although Sasaki and Ozin do not suggest the particular steps with coating multiple layers over each other, one of ordinary skill in the art would have reasonably been guided to use a cover layer of Ozin when coating the substrate of Sasaki during all the capillary coating steps, and would have recognized that either the removal of the cover layer between

deposition steps or the continual pressing of the cover layer against the substrate throughout the coating method, or some combination of the two, would have been the only operable solutions and that the substitution of one method for the other would have yielded predictable results. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have either repeated the claimed step (b) after removal of the cover layer or repeated the claimed steps (a)(ii), (b), and (c) after step (c) in the process of Sasaki and Ozin with a reasonable expectation of success because the modified method would have only presented a finite number of predictable solutions and because one of ordinary skill in the art would have pursued the limited potential solutions.

In a second interpretation, the solutions of 8R, 8G, and 8B are interpreted to be the different solutions containing different materials. The formation of layers 6R, 6G, and 6B form stacked layers (Fig. 2; organic layer 59 in Fig. 2 corresponds to the layer 6).

Claim 8: The first solution, second solution, first different solution, and second different solution are interpreted to be the anode solution of column 3B, the anode solution of column 3G, solution 8B, and solution 8G, respectively.

Sasaki and Ozin do not explicitly teach the use of a first cover layer and a second cover layer. However, the first cover layer and the second cover layer are interpreted to be the same cover layer. One of ordinary skill in the art would have recognized that the use of a single cover layer, as opposed to multiple cover layers, would have reduced production costs. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have used a single cover layer in the capillary coating method of Sasaki and Ozin with a reasonable expectation of success. One would have been motivated to do so in order to have increased cost efficiency of the manufacturing process.

Claim 10: The first and second cover layer can be the same cover layer as discussed above.

Claim 12: Sasaki teaches that a third solution 8R can be used to form layer 6R.

Claim 18: The combination of Sasaki and Ozin teaches pressing the cover layer of Ozin against the spacer layer of Sasaki. Accordingly, the cover layer is interpreted to form the upper portion of the spacer layer.

6. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki '010 in view of Ozin '030 as applied to claims 1 and 8 above, and further in view of Ogawa et al. (U.S. Publication No. 2002/0137248).

Sasaki and Ozin are discussed above. Sasaki teaches that the spacer layers 60 are formed of SiO₂ [0083], but does not explicitly teach that the pattern layer can be selectively removed to define the predetermined region. However, Ogawa teaches it was well known to form a SiO₂ pattern through photolithography (i.e., selectively removing portions of the layer to define a region) [0084]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have patterned the SiO₂ spacer layers of Sasaki through photolithography with a reasonable expectation of success because Ogawa teaches that such methods are operable for patterning SiO₂ layers. The selection of something based on its known suitability for its intended use has been held to support a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945).

Sasaki teaches that the spacer layer defines the grooves on the substrate.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 4, 6, 8, 10, 12, and 18-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Biebuyck et al. (U.S. Patent No. 5,855,994) discloses a method of capillary coating (Figs. 6-7C). Choi (U.S. Publication No. 2006/0132041) discloses a method of coating a fluorescent lamp via capillary action (abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy Lin whose telephone number is 571-272-8902. The examiner can normally be reached on Monday thru Friday 8AM - 5:30PM.

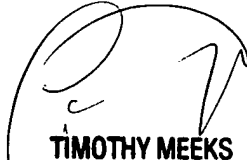
Art Unit: 1792

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JL

JL



TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER